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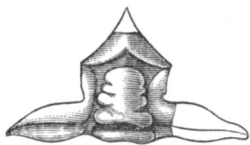
DESCRIPTION OF A NEW CRUSTACEAN FROM THE UPPER SILURIAN OF  
GEORGIA, WITH REMARKS UPON CALYMENE CLINTONI.

BY ANTHONY W. VOGDES, U. S. A.

*Calymene rostrata* Vogdes.

This species differs in one aspect from the usual forms classed under the genus *Calymene*, in having a projecting process arising directly from the cephalic shield in front of the glabella, and in this respect resembles *Homalonotus rhinotropis* of Angelin, a species which has been referred by Salter, in his monograph of British Trilobites, to *H. Knightii*. Salter says "the front margin

Fig. 1.



*Calymene rostrata* Vogdes.  
The glabella and fixed cheeks  
showing the projecting  
process.

is of most singular structure and may be described as tricuspid. The narrow edge is so deeply indented, and at the same time folded, that the front portion overhangs the rostral shield, forms one projecting angle flanked by two smaller projections opposite the axial furrows, exactly like the salient and re-entering angles of a fortification." Our species has only the central triangular projection, the margins of which are deflected, and the marginal border unites and forms a triangular projection, directly in front and on the median line.

The following characteristics are drawn from three specimens, consisting of the glabella and fixed cheeks, and many pygidia found associated with them at the same locality.

The glabella is convex and widens out posteriorly, being contracted in front; the sides are marked with three lobes, the basal one large, the middle lobe nearly spherical, the third is somewhat obscurely defined. The fixed cheeks are separated from the glabella by deep dorsal furrows, but opposite the eyes the furrows are restricted by a buttress thrown across it, nearly touching the middle side lobes; the cheeks are gibbous but not elevated above the glabella, they are narrow along the sides of the glabella and widen out laterally from the eyes. The facial sutures cut the posterior angles of the head, but anteriorly from the eyes these lines run almost straight with a slight tendency outward, and pass over the margin. The neck furrow is continued nearly to the posterior angles of the

head. The frontal limb is triangular in outline, and prolonged into a prominent projection, the bourrelet of the limb is defined by a triangular ridge which forms the base of the projection. The projection is formed by the thickening of the crust and by the union of the outer marginal borders along the median line, it is pointed and has its sides deflected. The space between the front of the glabella and the base of the projection is somewhat depressed.

The pygidium is obtusely triangular, with the front greatly arched in uncrushed specimens, but this character seems to be confined to the medium-sized specimens; the larger forms are not so much arched, and correspond in this respect to typical pygidia of *C. blumenbachii*. The axis occupies along the anterior border about one-third of the width of the tail, and gradually tapers posteriorly into an obtuse point; it is marked with about eight or nine articulations, the anterior one being slightly arched forwards, but the others are extended almost straight across it. The dorsal furrows are well defined. The lateral lobes are marked with five pairs of ribs, four of which are grooved and double half-way up; they are contracted along the dorsal furrows, but widen out laterally. The ribs curve downwards and backwards, and are separated from each other by well-defined grooves, the last pair unite and form a ridge extending around the posterior termination of the axis.

Fig. 2.



*Calymene rostrata*  
Vogdes. The pygidium usually found associated with the head.

*Geological Position.*—Clinton Group, Taylor's Ridge, near Catoosa Station; and also at Dug Gap, Georgia.

Among the trilobite specimens which I have collected in Georgia, there are three movable cheeks and one pygidium showing a strong resemblance to the same parts of *Calymene Clintoni* as figured by Prof. Hall in Pal. N. Y., vol. ii, pl. 66 a, fig. 5. These fragments were found associated with two glabellæ, having characteristics not shown by the illustrations of the species just referred to; therefore, for the purpose of comparison, I carried the specimens to the American Museum, and through the courtesy of Prof. Whitfield was enabled to study the trilobites found in the Clinton Group of New York. The Georgia forms are almost identical with those of New York, but show some

variations from the typical *C. Clintoni*; I shall, therefore, describe these fragments.

***Calymene Clintoni* Vanuxem.**

Glabella slightly convex, the base broad, so as to form a nearly equilateral triangle. The sides are marked with three lobes, the posterior one being twice as large as the middle lobe, but the anterior one is ill-defined. The dorsal furrows are deep. The occipital ring triangular in front, and narrowing out laterally. The frontal limb is broad, and equal to half the length of the glabella, and arched in front. It is worthy of remark that this character is not common to the minute glabella found in the same beds. The fixed cheeks have a buttress thrown across them

Fig. 3.



*Calymene Clintoni* Vanuxem. The glabella and fixed cheeks showing the wide frontal limb.

Fig. 4.



*Calymene Clintoni* Vanuxem. The movable cheek.

extending along the sides of the glabella, but this does not elevate them above it. The movable cheeks are triangular in outline, and posteriorly extended into spines, and correspond to those figured by Prof. Hall, Pal. N. Y., vol. ii, pl. 66 a, fig. 5, c. They are convex laterally along their inner half, and grooved near the outer margin, which is defined by a raised border. The pygidium is triangular in outline, and resembles the figure of this part given by Prof. Hall, Pal. N. Y., vol. ii, pl. 66 a, fig. 5 a, d, except in size. The axis is marked with about eight articulations. The lateral lobes are not marked with ribs, as usual in *Calymene*, and in this respect the pygidium bears some resemblance to that of *C. arago* and *C. salteri*, two European forms found in the Lower Silurian, and described by Rousault in 1849.

*Geological Position.*—Clinton Group, Catoosa Station; also in the Hematitic bed at Dug Gap, Georgia.